



GIGABYTE™

Your Best **B2B Solutions**

Server / Workstation
Embedded / IoT Motherboard
BRIX Mini-PC System



Upgrade Your Life™

A global leader in the PC industry, GIGABYTE offers a comprehensive product lineup that aims to “Upgrade Your Life.” With expertise encompassing consumer, business, gaming, and cloud systems, GIGABYTE uses research and innovation to consistently meet user needs. GIGABYTE is renowned for award-winning products including motherboards, graphics cards, laptops, mini PCs, and other PC components and accessories, and has revolutionized the PC industry with patented DualBIOS™ and Ultra Durable™ technologies. As an expert in PC technology, GIGABYTE is poised to extend our scope in business servers and cloud systems with hardware and software solutions that integrate AI and AIoT applications to develop the ideal infrastructure for future prospects in 5G.

Creating Brand Value

GIGABYTE has received numerous awards from prestigious organizations and industrial magazines all around the world.



Manufacturing Capacity



1.Nan-Ping, Taiwan



2.Ning-Bo, China



3.Dong-Guan, China

Product Type	Ning-Bo	Dong-Guan	Nan-Ping	Total / Monthly
Motherboards	500K	600K	200K	1,300K
Graphics Cards	-	250K	200K	450K
Desktops PC & Peripherals	40K	50K	10K	100K
Laptops	-	-	10K	10K
Server	40K	10K	10K	60K
Embedded and IOT	-	5K	2K	25K
Floor Space	60,000 M ²	38,000 M ²	45,000 M ²	

Quality Policy & Certificates

GIGABYTE implement Total Quality Management to ensure Environment Protection & Customer Satisfaction.



GIGABYTE Advantages

- **Global Service**
GIGABYTE has Service centers all over the world, providing global service for customers.
- **Fast and Flexible**
GIGABYTE is a self manufacturer, which makes us extremely flexible and fast responding with customers' demands. We can even make customized BIOS for customer's needs.
- **Ultra Durable Quality**
Quality components make quality products, GIGABYTE uses Ultra Durable components, making our products steady and solid.

Corporate Social Responsibility

Connecting to the UN SDGs and achieving economic, social and environmental sustainability hand in hand with consumers, suppliers and the general public

- **Greenhouse gas emission reduces by 42.38% in 2017**
compared with the basic year level of 2009
- **Commit to planting 75,000 trees and Empowering 250 Climate Justice Ambassadors**
Cooperated with the Plant-for-the-Planet Foundation, GIGABYTE launched 'Make Earth Green Again' in 2017, aiming at combating climate crisis by planting more trees, strengthening climate literacy and empowering Taiwanese children to take actions

Virtualization

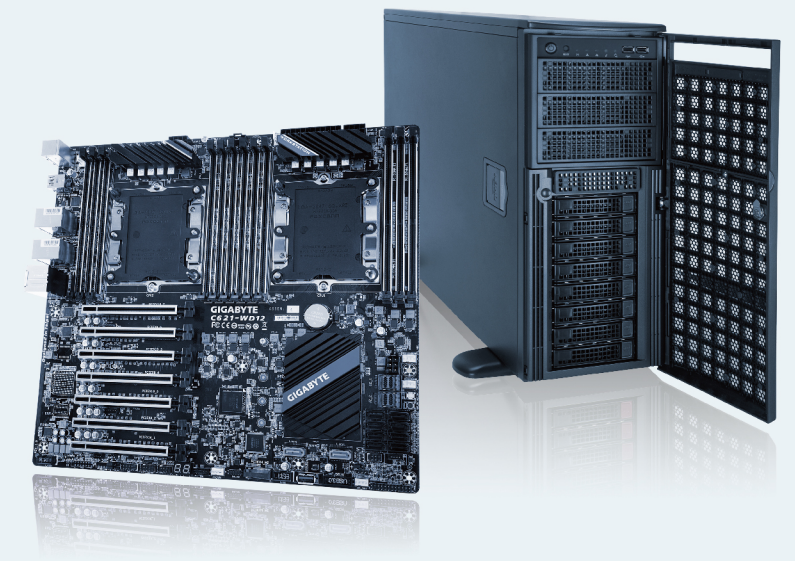
GPU Computing

Web hosting

Design & Manufacturing

Multi-display

Database Processing &
Storage



Server / Workstation



Intel® Xeon® Scalable Family Processors Supported

Intel® Xeon® Scalable processors are designed for the performance demands of complex, data-demanding workloads such as in-memory databases, and real-time business analytics.

NVIDIA® QUADRO® Professional Graphics Supports

NVIDIA® QUADRO® 3D Workstation Professional Graphics Solutions are designed and built specifically for artists, designers, and engineers, NVIDIA Quadro GPUs power more than 100 professional applications across a broad range of industries. Professionals trust them to enable their best work using applications such as Adobe® Creative Cloud, Avid Media Composer, Autodesk Suites, Dassault Systemes, CATIA and SOLIDWORKS, Siemens NX, PTC Creo, and many more.



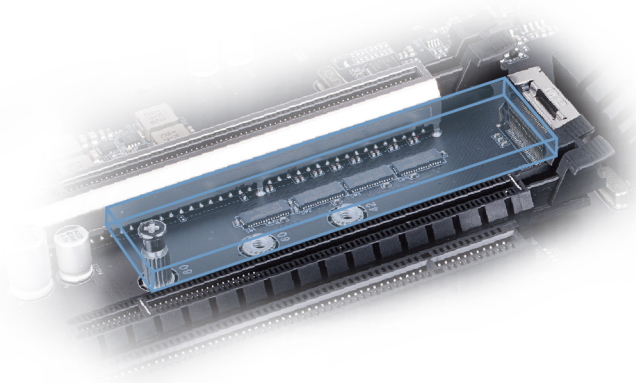
4-Way SLI™ / 4-Way CrossFire™ Multi-Graphics

Multi-graphics configurations offer better graphics performance for applications which demand the highest frame rates without compromising on resolution.



Fast Onboard Storage with 32Gb/s M.2

GIGABYTE M.2 solution offers considerably faster storage performance and support for both PCIe and SATA interface for M.2 SSD devices.



M.2	Up to 32 Gb/s* (PCIe Gen3 x4 M.2)
SATA 3	Up to 6 Gb/s*

Photo for reference only. Product features may vary by model. * Theoretical Bandwidth

Dual Intel® Server GbE LAN with cFosSpeed Internet Accelerator Software

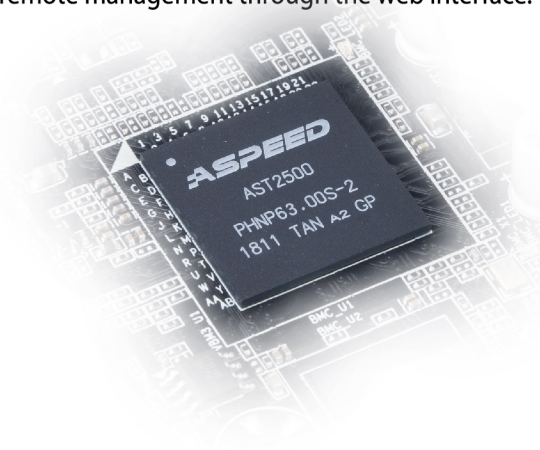
- cFosSpeed helps to improve network latency and maintain low ping times.
- Support Windows Server O/S
- Support Intel® vPro™ Technology
- Teaming Features
 - Fault Tolerance
 - Link Aggregation
 - Load Balancing

**NO LAG,
JUST FRAG!**



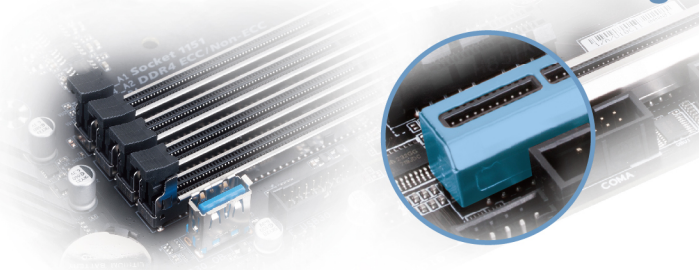
GIGABYTE Remote Management

With ASPEED AST 2500 BMC, Gigabyte server boards can provide an IPMI 2.0 compliant solution for IT managers to do remote management through the web interface.



- Key Features include:
- IPMI 2.0 implementation
 - Full configuration via web interface
 - Hardware status monitor
 - Remote power control
 - Remote firmware update
 - Remote KVM with image redirection
 - Event log and reporting
 - Easy and convenient user management

GIGABYTE Ultra Durable™ Design



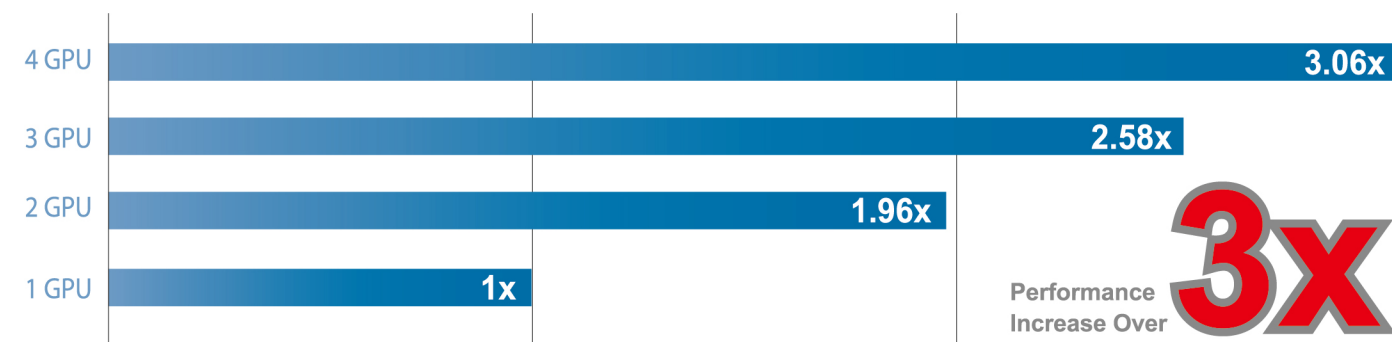
- Carefully Selected Components
- GIGABYTE Patented Double Locking Bracket
- Ultra Durable™ PCIe Armor
- Ultra Durable™ Memory Armor

	C621-SD8	C621-SU8	C621-WD12	C621-WD12-IPMI	X299-WU8	C246-WU4	C246M-WU4
Intel® Xeon® Family	V	V	V	V		V	V
Multi-Graphics		3-way SLI / CrossFireX support	4-way SLI / CrossFireX support	4-way SLI / CrossFireX support	4-way SLI / CrossFireX support	4-way SLI / CrossFireX support	2-way SLI / CrossFireX support
NVIDIA QUADRO Support	V	V	V	V	V	V	V
Dual Intel GbE LAN	V	V	V	V	V	V (vPro)	V (vPro)
BMC	V	V	V	V			
Dual M.2		V			V	V	V

High Performance Multi-GPU Solutions

Delivered by Dual Intel® Xeon Scalable CPUs and 7 x PCIe x16 Slots

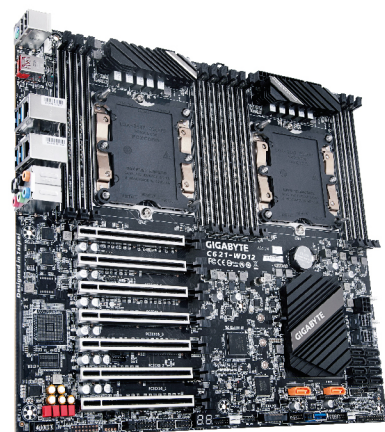
Rendering Performance Comparison



Tests run on a GIGABYTE C621-WD12 motherboard with Intel Xeon Gold 6134, 32 cores 3.2GHz, 192GB RAM, running Win 10 64-bit, GeForce RTX™ 2080 TI TURBO, Fall Creators Update. Performance testing completed with V-Ray Benchmark 1.0.8 and driver version 3.57.01, 3D render resolution. * Image and chart above may show a varied configuration or optional parts, please refer to parts list for standard parts included.



C621-WD12



- Intel® Xeon™ Scalable Processors, Dual LGA 3647 Socket P
- 6-Channel 12 x DDR4 RDIMMs/ LRDIMMs up to 2933 MHz, ECC supported, up to 1.5TB
- 7 PCIe x16 Slots design, 4-way SLI / CrossFireX support
- Dual Intel i210AT GbE LAN

X299-WU8



- Intel® Core™ X-Series Processors, LGA 2066 Socket R4
- 4-Channel 8 x DDR4 UDIMMs up to 4000 MHz(O.C.)
- 7 PCIe x16 Slots design, 4-way SLI/CrossFireX support
- Dual Intel Server GbE LAN

C246-WU4



- Intel® Xeon™ E Processors Intel® 9th and 8th Core i / Pentium / Celeron Processors, LGA 1151 Socket H4
- 2-Channel 4 x DDR4 UDIMMs up to 2666 MHz, ECC / non-ECC supported
- 4 PCIe x16 Slots for multi cards, 4-way CrossFireX support
- Dual Intel Server GbE LAN, Intel® vPRO support



Model Name	S12-P04S
Form Factor	660 x 430 x 43.5(mm)
CPU	Intel® Xeon Scalable up to 28-cores, Dual LGA 3647 Socket P,TDP: 165W
Memory	8 x DIMM Slots support 4 channel Up to DDR4 2933 MHz, ECC RDIMM/LRDIMM memory
LAN	Dual Intel i210AT + 1 x Management LAN
Storage	4 x 3.5" SATA LFF (hot-swappable), 2 x 2.5" SATA SFF (fixed), 1 x M.2 PCIe x4 2280/2260
Expansion Slots	1 x PCIe x8 FH/HL
Rear I/O	1 x VGA, 2 x RJ45, 1 x MLAN, 2 x USB3.0, 1 x ID button
TPM	1 x TPM header
Power Supply	650W single PSU
Remote Management	ASPEED® AST2500 BMC



Model Name	S12-P10R
Form Factor	660 x 430 x 43.5 (mm)
CPU	Intel® Xeon Scalable up to 28-cores, Dual LGA 3647 Socket P,TDP: 165W
Memory	8 x DIMM Slots support 4 channel Up to DDR4 2933 MHz, ECC RDIMM/LRDIMM memory
LAN	Dual Intel i210AT + 1 x Management LAN
Storage	10 x 2.5" SATA SFF (hot-swappable), 1 x M.2 PCIe x4 2280/2260
Expansion Slots	1 x PCIe x8 FH/HL
Rear I/O	1 x VGA, 2 x RJ45, 1 x MLAN, 2 x USB3.0, 1 x ID button
TPM	1 x TPM header
Power Supply	650W 1+1 redundant PSU
Remote Management	ASPEED® AST2500 BMC



Model Name	S12-P04R
Form Factor	660 x 430 x 43.5(mm)
CPU	Intel® Xeon Scalable up to 28-cores, Dual LGA 3647 Socket P,TDP: 165W
Memory	8 x DIMM Slots support 4 channel Up to DDR4 2933 MHz, ECC RDIMM/LRDIMM memory
LAN	Dual Intel i210AT + 1 x Management LAN
Storage	4 x 3.5" SATA LFF (hot-swappable), 2 x 2.5" SATA SFF (fixed), 1 x M.2 PCIe x4 2280/2260
Expansion Slots	1 x PCIe x8 FH/HL
Rear I/O	1 x VGA, 2 x RJ45, 1 x MLAN, 2 x USB3.0, 1 x ID button
TPM	1 x TPM header
Power Supply	650W 1+1 redundant PSU
Remote Management	ASPEED® AST2500 BMC



Model Name	W42G-P08R
Form Factor	435 x 658 x 177(mm)
CPU	Intel® Xeon Scalable up to 28-cores, Dual LGA 3647 Socket P,TDP: 205W
Memory	12 x DIMM Slots support 6 channel Up to DDR4 2933 MHz, ECC RDIMM/LRDIMM memory
LAN	Dual Intel i210AT
Storage	6 x 3.5" SATA LFF (hot-swappable), 2 x U.2 (hot-swappable), 1 x M.2 PCIe x4 22110/2280/2260
Expansion Slots	4 x PCIe x16 FH/FL, 3 x PCIe x16 FH/FL (run as x8)
Rear I/O	2 x RJ45, 2 x USB3.1 (1x Type-C), 4 x USB3.0, 2 x USB2.0, 1 x P/S2, 5 audio jacks + S/PDIF-out
TPM	1 x TPM header
Power Supply	2000W 1+1 redundant PSU
Remote Management	ASPEED® AST2500 BMC



Model Name	C621-SD8	C621-SU8	C621-WD12/C621-WD12-IPMI
Form Factor	CEB (305mm x 267mm)	ATX (305mm x 244mm)	EEB (305mm x 330mm)
CPU	Intel® Xeon Scalable Processors	Intel® Xeon Scalable Processors	Intel® Xeon Scalable Processors
	Dual LGA 3647 Socket P	LGA 3647 Socket P	Dual LGA 3647 Socket P
Memory	8 x DIMM Slots support 4 channel	8 x DIMM Slots support 6 channel	12 x DIMM Slots support 6 channel
	Up to DDR4 2933 MHz	Up to DDR4 2933 MHz	Up to DDR4 2933 MHz
	ECC RDIMM/LRDIMM memory	ECC RDIMM/LRDIMM memory	ECC RDIMM/LRDIMM memory
LAN	Dual Intel i210AT	Dual Intel i210AT	Dual Intel i210AT
Storage	10 x SATAIII 6Gb/s,	8 x SATAIII 6Gb/s, 1 x M.2 PCIe x4,	10 x SATAIII 6Gb/s,
	1 x M.2 PCIe x4	1 x M.2 PCIe x2/SATA Mode	1 x M.2 PCIe x4/SATA Mode, 2 x U.2
Expansion Slots	3 PCIe x16 Slots and 3 PCIe x8 Slots	3 PCIe x16 Slots and 3 PCIe x8 Slots	7 PCIe x16 Slots
	-	3-way SLI/CrossFireX support	4-way SLI/CrossFireX support
Rear I/O	1 x VGA, 2 x RJ45, 1 x MLAN, 2 x USB3.0	1 x COM, 1 x VGA, 2 x RJ45, 1 x MLAN, 2 x USB3.1,	2 x RJ45, 2 x USB3.1 (1x Type-C), 4 x USB3.0, 2 x USB2.0,
	1 x ID button	2 x USB3.0, 1 x ID button,	1 x P/S2, 5 audio jacks + S/PDIF-out
	-	5 audio jacks + S/PDIF-out	1 x VGA (Bracket)* / 1 x COM (Bracket)*
TPM	1 x TPM header	1 x TPM header	1 x TPM header
Remote Management	ASPEED® AST2500 BMC	ASPEED® AST2500 BMC	ASPEED® AST2500 BMC chip* * only for C621-WD12-IPMI



Model Name	X299-WU8	C246-WU4	C246M-WU4
Form Factor	CEB (305mm x 267mm)	ATX (305mm x 244mm)	mATX (244mm x 244mm)
CPU	Intel® Core™ X-Series Processors	Intel® Xeon E Processors, Intel® 9th/8th Core i /	Intel® Xeon E Processors, Intel® 9th/8th Core i /
	LGA 2066 Socket R4	Pentium / Celeron Processors LGA 1151 Socket	Pentium / Celeron Processors LGA 1151 Socket
Memory	8 x DIMM Slots support 4 Channel	4 x DIMM slots support 2 channel	4 x DIMM slots support 2 channel
	Up to DDR 4000 MHz(O.C.)	Up to DDR4 2666 MHz	Up to DDR4 2666 MHz
	Un-buffered DIMM memory	ECC & Non-ECC Un-buffered DIMM memory	ECC & Non-ECC Un-buffered DIMM memory
LAN	Intel i219LM + i210AT with 25KV Surge Protection	Intel i210AT, i219LM (supports Intel vPRO)	Intel i210AT, i219LM (supports Intel vPRO)
Storage	8 x SATAIII 6Gb/s	10 x SATAIII 6Gb/s, 1 x M.2 PCIe x4,	8 x SATAIII 6Gb/s, 1 x M.2 PCIe x4,
	1 x M.2 PCIe x4/SATA Mode	1 x M.2 PCIe x2/SATA Mode	1 x M.2 PCIe x4/SATA Mode
Expansion Slots	7 PCIe x16 Slots	4 PCIe x16 Slots and 1 PCI Slot	2 PCIe x16 Slots and 2 PCIe x1 Slots
	4-way SLI/CrossFireX support	4-way CrossFireX support	2-way CrossFireX support
Rear I/O	2 x USB3.1 Gen 2(Type-C + Type-A),	2 x DP, 2 x RJ45, 2 x USB3.1(1x TYPE-C)	DP/DVI-D/D-Sub, 2 x RJ45, 1 x USB3.1
	6 x USB3.0,	4 x USB3.0, 2 x USB2.0	5 x USB3.0, 6 x Audio Jacks
	2 x USB2.0, 5 x Audio Jacks + SPDIF-Out, PS/2	5 x Audio Jacks + SPDIF-Out	-
TPM	1 x TPM header	1 x TPM header	1 x TPM header

Transportation

Vision

Education

Smart City

Industrial

Retail

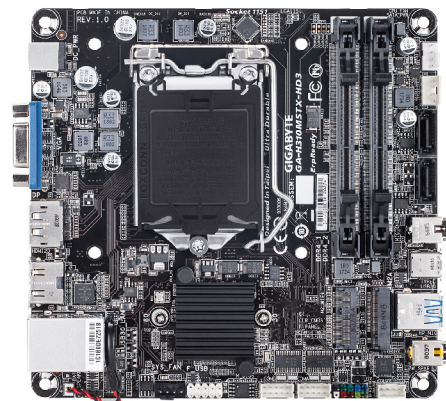
Medical



IoT Products

Small but Powerful

GA-H310MSTX-HD3

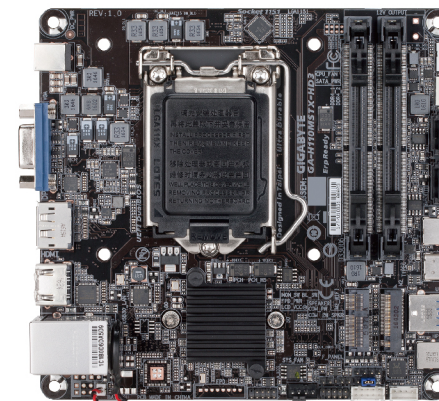


Compatible with GIGABYTE Mini STX Chassis (Size:193 x 153 x 67 mm)

Form Factor	
Dimensions	Mini-STX (5.51-in x 5.78-in)
Processor System	
CPU	Socket LGA1151 for Intel Core i7/i5/i3/Celeron (Coffee lake-S)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	H310
BIOS	UEFI
Expansion Slot	
PCI	0
PCIe	1 x M.2 CNVI wifi slot, 1 x M.2 2260/80 Slot for Storage (SATA/PCIe)
mSATA	0
SIM	0
Memory	
Technology	Dual Channel DDR4 2133/2400 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM
Graphics	
Controller	Intel® Gen10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	N/A
HDMI	Supports HDMI 1.4, max resolution 3840 x 2160
DVI	No
Display Port	Yes
Multi Display	Yes(Dual Display)
Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT
Connector	1 x RJ-45
SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	HDMI1.4
DVI-I/D	0
Display Port	1
Ethernet	1
USB	Front 1 x USB3.0, 1 x USB3.0 typeC, 2 x USB3.0
Audio	Front 2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0
Internal Connector	
USB	2 x USB2.0
LVDS/Inverter	0/0
VGA	1
Serial	2 RS-232
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	0
Mini-PCIe	0
Parallel	0
IrDA	0
Digital I/O	0
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	0
Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min
Power Requirements	
Input PWR	19V DC-In AT/ATX Supported
Power On	AT:Directly PWR on as Power input ready ATX:Press Button to PWR on after Power input ready
Environment	
Operating Temperature	0°C ~ 50°C

GA-H110MSTX-HD3

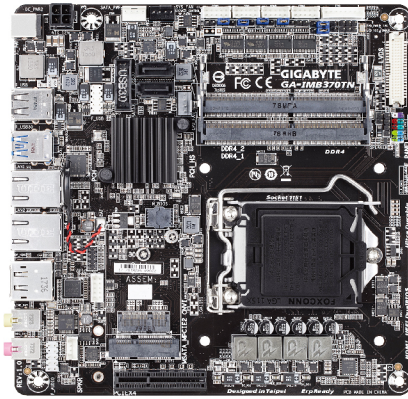


Compatible with GIGABYTE Mini STX Chassis (Size:193 x 153 x 67 mm)

Form Factor	
Dimensions	Mini-STX (5.5-in x 5.78-in)
Processor System	
CPU	Socket LGA1151 for Intel Core i7/i5/i3/Celeron(Skylake/Kaby lake)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	H110
BIOS	UEFI
Expansion Slot	
PCI	0
PCIe	1 x M.2 CNVI wifi slot, 1 x M.2 2260/80 Slot for Storage (SATA)
mSATA	0
SIM	0
Memory	
Technology	Dual Channel DDR4 2133 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM
Graphics	
Controller	Intel® Gen10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	N/A
HDMI	Supports HDMI 1.4, max resolution 3840 x 2160
DVI	No
Display Port	Yes
Multi Display	Yes(Dual Display)
Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT
Connector	1 x RJ-45
SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	HDMI1.4
DVI-I/D	0
Display Port	1
Ethernet	1
USB	Front 1 x USB 3.0, 1 x USB 3.0 typeC, 2 x USB3.0
Audio	Front 2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0
Internal Connector	
USB	2 x USB 3.0 compliant, 2 x USB2.0
LVDS/Inverter	0/0
VGA	1
Serial	1 RS-232
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	0
Mini-PCIe	0
Parallel	0
IrDA	0
Digital I/O	0
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	0
Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min
Power Requirements	
Input PWR	19V DC-In AT/ATX Supported
Power On	AT:Directly PWR on as Power input ready ATX:Press Button to PWR on after Power input ready
Environment	
Operating Temperature	0°C ~ 50°C

GA-IMB370TN



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Socket LGA1151 for Intel Core 65W i7/i5/i3/ Pentium / Celeron (Coffee lake-5)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	Q370
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1 x full size mini-PCIe slot co-lay with mSATA, 1 x M.2 CNVI, 1 x M.2 2260/80 SATA/PCIe slot Slot for Storage, 1 x PCIe x 4 slot
mSATA	1(Share with full size Mini PCIe slot)
SIM	1

Memory	
Technology	Dual Channel DDR4 2133/2400 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen 10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 2.0, max resolution 3840 x 2160
DVI	No
Display Port	Yes
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT 1 x i219LM
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	1 (2.0)
DVI-I/D	0
Display Port	1
Ethernet	2
USB	2 x USB 3.0, 2 x USB2.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

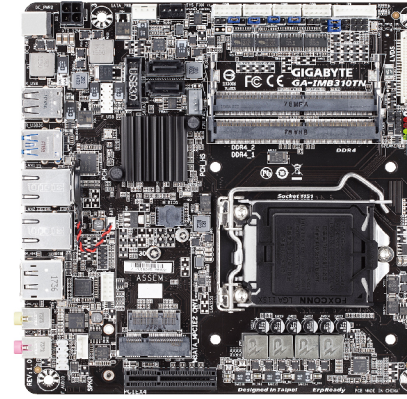
Internal Connector	
USB	2 x USB 3.0 compliant, 2 x USB2.0
LVDS/Inverter	1/1
VGA	1
Serial	4 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	1/1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector)
Power On	AT/ATX Supported AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-IMB310TN



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Socket LGA1151 for Intel Core 65W i7/i5/i3/ Pentium / Celeron (Coffee lake-5)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	H310
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1 x full size mini-PCIe slot co-lay with mSATA, 1 x M.2 CNVI, 1 x M.2 2260/80 SATA/PCIe slot Slot for Storage, 1 x PCIe x 4 slot
mSATA	1(Share with full size Mini PCIe slot)
SIM	1

Memory	
Technology	Dual Channel DDR4 2133/2400 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen 10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 2.0, max resolution 3840 x 2160
DVI	No
Display Port	Yes
Multi Display	Yes(Dual Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT 1 x i219V
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	1 (2.0)
DVI-I/D	0
Display Port	1
Ethernet	2
USB	2 x USB 3.0, 2 x USB2.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

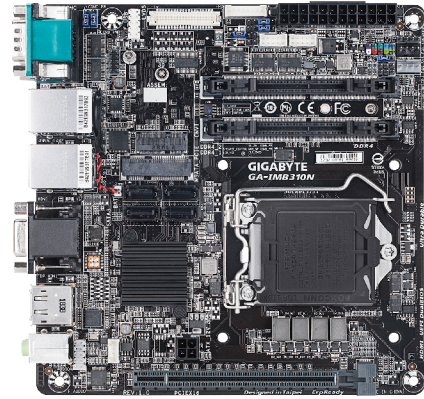
Internal Connector	
USB	2 x USB 3.0 compliant, 2 x USB2.0
LVDS/Inverter	1/1
VGA	1
Serial	4 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	1/1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector)
Power On	AT/ATX Supported AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

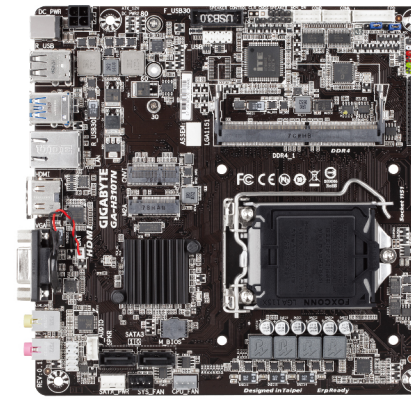
GA-IMB310N



Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)
Processor System	
CPU	Socket LGA1151 for Intel Core i7/i5/i3/ Pentium / Celeron (Coffee lake-S)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	Q370/H310
BIOS	UEFI
Expansion Slot	
PCI	0
PCIe	1 x full size mini-PCIe slot co-lay with mSATA, 1 x M.2 CNVI, 1 x M.2 2260/80 SATA/PCIe slot Slot for Storage, 1 x PCIe x 16 slot
mSATA	1(Share with full size Mini PCIe slot)
SIM	1
Memory	
Technology	Dual Channel DDR4 2133/24000 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM
Graphics	
Controller	Intel® Gen 10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 2.0, max resolution 3840 x 2160
DVI	No
Display Port	Yes
Multi Display	Yes(Dual Display)
Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT 1 x i219LM
Connector	2 x RJ-45
SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1 (2.0)
DVI-I/D	0
Display Port	1
Ethernet	2
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	2 (RS-232/422/485)
e-SATA	0
PS/2	0
Internal Connector	
USB	2 x USB2.0
LVDS/Inverter	1/1
VGA	1
Serial	2 RS-232
SATA	4 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	1/1
SATA PWR Output Con	1
Speaker Header	1
Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min
Power Requirements	
Input PWR	ATX Power connector
Power On	AT/ATX Supported AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready
Environment	
Operating Temperature	0°C ~ 60°C

GA-H310TN

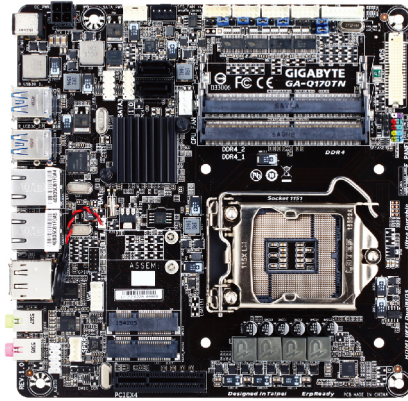


Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)
Processor System	
CPU	Socket LGA1151 for Intel Core i7/i5/i3/ Pentium/Celeron (Coffee lake)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	H310
BIOS	UEFI
Expansion Slot	
PCI	0
PCIe	1 x M.2 CNVI wifi slot, 1 x M.2 SATA 2242 / 60 / 80 Slot
mSATA	0
SIM	0
Memory	
Technology	Single Channel DDR4 2133/2400 MHz SDRAM
Max	16G
Socket	1 x SO-DIMM
Graphics	
Controller	Intel® Gen 10 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 1920x1200
DVI	No
Display Port	No
Multi Display	Yes(Dual Display)
Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Realtek RTL8111H
Connector	1 x RJ-45
SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1 (1.4a)
DVI-I/D	0
Display Port	0
Ethernet	1
USB	2 x USB 3.0 , 2 x USB 2.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0
Internal Connector	
USB	2 x USB 3.0 compliant, 2 x USB2.0
LVDS/Inverter	1/1
VGA	0
Serial	2 x RS232
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	0
Mini-PCIe	0
Parallel	0
IrDA	0
Digital I/O	0
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	1
Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min
Power Requirements	
Input PWR	19 V DC-In (4-pin ATX PWR connector)
Power On	AT/ATX Supported AT : Directly PWR on as Power input ready ATX : Press Button to PWR on after Power input ready
Environment	
Operating Temperature	0°C ~ 50°C

GA-Q170TN-T20-GSM Plus



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Socket LGA1151 for Intel Core i7/i5/i3/ Pentium / Celeron (Skylake-S/Kaby lake-S)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	Q170
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x half/Half size mini-PCIe slot, PCIe +USB1 x Full size mini-PCIe slot co-lay with mSATA, 1x PCIe x4 slot
mSATA	1
SIM	0

Memory	
Technology	Dual Channel DDR4 2133 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen9 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 3840x2160
DVI	No
Display Port	Yes
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT 1 x i217LM
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	1
DVI-I/D	0
Display Port	1
Ethernet	2
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

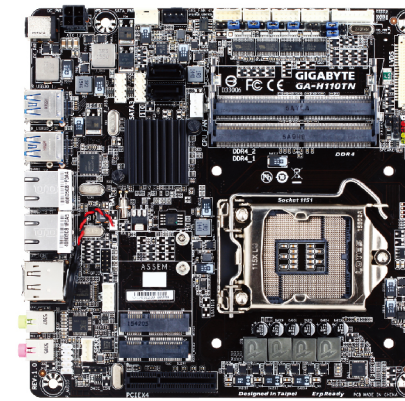
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	1
Serial	4 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector)
Power On	AT/ATX Supported AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-H110TN



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Socket LGA1151 for Intel Core 65W i7/i5/i3/ Pentium / Celeron (Skylake-S/Kaby lake-S)
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	H110
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x half/Half size mini-PCIe slot, PCIe +USB1 x Full size mini-PCIe slot co-lay with mSATA, 1x PCIe x4 slot
mSATA	1
SIM	0

Memory	
Technology	Dual Channel DDR4 2133 MHz SDRAM
Max	32G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen9 Intel Graphics DX 11/12, OGL4.3/4.4
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 3840x2160
DVI	No
Display Port	Yes
Multi Display	Yes(Dual Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Intel i211AT 1 x i217V
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	1
DVI-I/D	0
Display Port	1
Ethernet	2
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

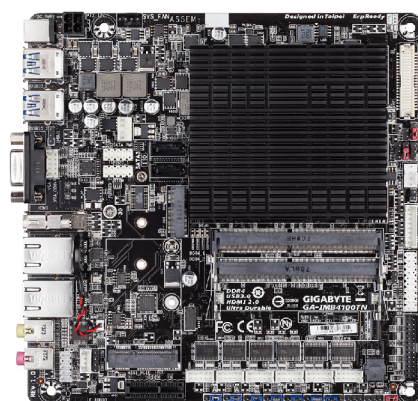
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	1
Serial	4 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector)
Power On	AT/ATX supported AT: Directly PWR on as Power input ready ATX: Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-IMB4100TN



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Intel® Celeron Gemini Lake SoC
	Supports Hyper-Threading Technology
	Default N4100 Quad core 6W processor
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	(By CPU)
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x half / Half size mini-PCIe slot,
	1 x M.2 2242/60/80 2slot, SATA/PCIe slot
	1 x M.2 CNVI Wifi slot, 1x PCIe x1 slot
mSATA	1
SIM	0

Memory	
Technology	Dual Channel DDR4 2133 MHz SDRAM
Max	16G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen 10 Intel Graphics DX 11*, OGL3.2
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 2.0, max resolution 3840 x 2160
DVI	No
Display Port	No
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	2 x Realtek RTL8111H
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1 (2.0)
DVI-I/D	0
Display Port	0
Ethernet	2
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

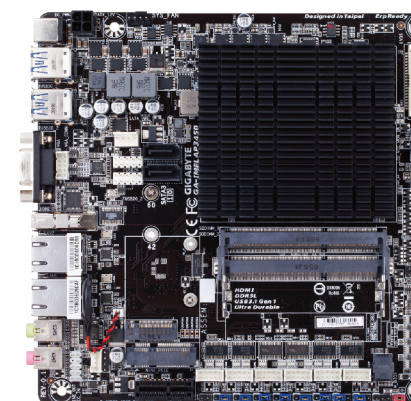
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	6 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s), 1 SATA share with mSATA
m-SATA	1
Mini-PCIe	1
Parallel	1 (Co-lay with 8in/8out DIO)
IrDA	0
Digital I/O	8 in/8 out
I2C/SMBUS	1/1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector
	AT/ATX Supported
Power On	AT: Directly PWR on as Power input ready
	ATX: Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-IMBLAP3450 / 3350



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:204.6 x 205 x 45 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System		
CPU	Intel® Celeron Apollo Lake SoC Supports Hyper-Threading Technology Default N3350/N3450, Dual/Quad Core 6W Processor	
	Core Number	(By CPU, Max 4)
	Max Speed	(By CPU)
L2 Cache	(By CPU)	
Chipset	(By CPU)	
BIOS	UEFI	

Expansion Slot	
PCI	0
PCIe	1x half / Half size mini-PCIe slot, PCIe +USB
	1 x M.2 2242/60 slot SATA/PCIe slot
	1x PCIe x1 slot
mSATA	1
SIM	0

Memory	
Technology	Dual Channel DDR3L 1600/1866 MHz SDRAM
Max	16G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen 9 Intel Graphics DX 11*, OGL3.2
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 1920x1200
DVI	No
Display Port	No
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	2 x Realtek RTL8111H
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1
DVI-I/D	0
Display Port	0
Ethernet	2
USB	4 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

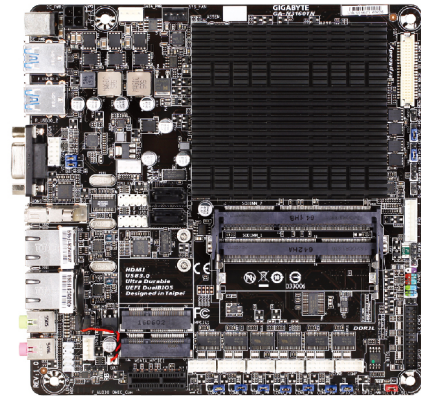
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	6 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s), 1 SATA share with mSATA
m-SATA	1
Mini-PCIe	1
Parallel	1 (Co-lay with 8in/8out DIO)
IrDA	0
Digital I/O	8 in/8 out
I2C/SMBUS	1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector
	AT/ATX supported
Power On	AT: Directly PWR on as Power input ready
	ATX: Press Button to PWR on after Power input ready

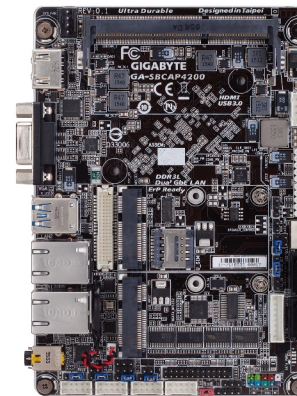
Environment	
Operating Temperature	0°C ~ 60°C

GA-N3160TN



Compatible with GIGABYTE Thin Mini ITX Chassis (Size:193 x 153 x 67 mm)

GA-SBCAP4200 /3450 / 3350



Compatible with GIGABYTE SBC Fanless Chassis (Size:193 x 153 x 67 mm)

Form Factor	
Dimensions	Mini-ITX (6.7-in x 6.7-in)

Processor System	
CPU	Intel® Celeron Braswell SoC
	Supports Hyper-Threading Technology
	Default N3160 Quad core 6W processor
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	(By CPU)
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x half/Half size mini-PCIe slot,
	PCIe+USB1 x Full size mini-PCIe slot co-lay with mSATA, 1x PCIe x1 slot
mSATA	1
SIM	0

Memory	
Technology	Dual Channel DDR3L 1333 / 1600 MHz SDRAM
Max	16G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen 8 Intel Graphics DX 11*, OGL3.2
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 1920x1200
DVI	No
Display Port	No
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	2 x Realtek RTL8111H
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1 (1.4a)
DVI-I/D	0
Display Port	0
Ethernet	2
USB	2 x USB 3.0
Audio	2 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	6 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s), 1 SATA share with mSATA
m-SATA	1
Mini-PCIe	2
Parallel	1 (Co-lay with 8in/8out DIO)
IrDA	0
Digital I/O	8 in/8 out
I2C/SMBUS	0
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12/19-24V DC-In (4-pin ATX PWR connector co-lay with Pheonix connector)
Power On	AT/ATX Supported
	AT:Directly PWR on as Power input ready
	ATX:Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

Form Factor	
Dimensions	3.5 inch SBC (5.74-in x 4.0-in)

Processor System	
CPU	Intel® Celeron Apollo Lake SoC
	Supports Hyper-Threading Technology
	Default N4200/3450/3350 Quad/Dual core 6W processor
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	(By CPU)
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x half/Half size mini-PCIe slot, PCIe+USB
	1x half/Half size mini-PCIe slot co-lay with mSATA
mSATA	1
SIM	1

Memory	
Technology	One Channel DDR3L 1600/1866 MHz SDRAM
Max	8G
Socket	1 x SO-DIMM

Graphics	
Controller	Intel® Gen 9 Intel Graphics DX 11*, OGL3.2
VRAM	Shared Memory
VGA	Supports max. resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 3840x2160
DVI	No
Display Port	NO
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	2 x Realtek RTL8111H
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	1
HDMI	1
DVI-I/D	0
Display Port	0
Ethernet	2
USB	2 x USB 3.0
Audio	1 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

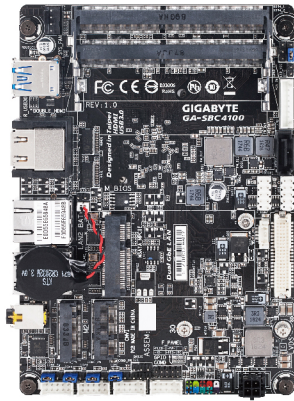
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	4 RS-232 (Two serial port support RS-232/422/485)
SATA	2 x SATA3 (6.0Gb/s), 1 SATA share with mSATA
m-SATA	1
Mini-PCIe	2 (1 x co-lay with mSATA SSD)
Parallel	1 (Co-lay with 8in/8out DIO)
IrDA	0
Digital I/O	8 in/8 out
I2C/SMBUS	1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	9~36V DC-In 4-pin ATX PWR connector
Power On	AT/ATX Supported
	AT:Directly PWR on as Power input ready
	ATX:Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-SBC4100



Compatible with GIGABYTE SBC Fanless Chassis (Size:193 x 153 x 67 mm)

Form Factor	
Dimensions	3.5 inch SBC (5.74-in x 4.0-in)

Processor System	
CPU	Intel® Celeron Gemini Lake SoC
	Supports Hyper-Threading Technology
	Default N4100 Dual core 6W processor
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	(By CPU)
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x full size mini-PCIe slot co-lay with mSATA 1 x M.2 PCIe 2280 slot, 1x M.2 CNWI Wifi slot
mSATA	1(Co-lay with Mini PCIe)
SIM	0

Memory	
Technology	Two Channel DDR4 2133 MHz SDRAM
Max	16G
Socket	2 x SO-DIMM

Graphics	
Controller	Intel® Gen10 Intel Graphics DX 12*, OGL4.4
VRAM	Shared Memory
VGA	Supports max.resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI2.0 max resolution 3840 x 2160
DVI	No
Display Port	No
Multi Display	Yes(Triple Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	2 x Realtek RTL8111H
Connector	2 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	HDMI 2 (2.0)
DVI-I/D	0
Display Port	0
Ethernet	2
USB	2x USB 3.0
Audio	1 (Mic-in, Line-out)
Serial	0
e-SATA	0
PS/2	0

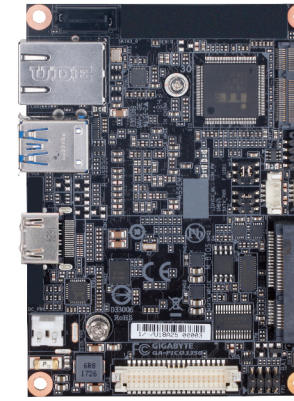
Internal Connector	
USB	4 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	4 RS-232(COM1/COM2 support RS-232/422/485)
SATA	1 x SATA3(6.0Gb/s), 1 SATA share with mSATA
m-SATA	1(Co-lay with Mini PCIe)
Mini-PCIe	1
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	1
SATA PWR Output Con	1
Speaker Header	1

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	9~36V DC-In 4-pin ATX PWR connector
Power On	AT/ATX Supported
	AT:Directly PWR on as Power input ready
	ATX:Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C

GA-PICO3350



Preliminary SPEC

Coming soon

Form Factor	
Dimensions	2.5 inch PICO-ITX (3.94-in x 2.83-in)

Processor System	
CPU	Intel® Celeron Apollo Lake SoC
	Supports Hyper-Threading Technology
	Default N3350 Dual core 6W processor
Core Number	(By CPU, Max 4)
Max Speed	(By CPU)
L2 Cache	(By CPU)
Chipset	(By CPU)
BIOS	UEFI

Expansion Slot	
PCI	0
PCIe	1x Full size mini-PCIe slot, co-lay with mSATA
mSATA	1
SIM	0

Memory	
Technology	One Channel DDR3L 1600/1866 MHz SDRAM
Max	8G
Socket	1 x SO-DIMM

Graphics	
Controller	Intel® Gen9 Intel® Graphics DX 11*, OGL3.2
VRAM	Shared Memory
VGA	Supports max.resolution 1920 x 1200
LVDS	Dual channel 24-bit co-lay with eDP, max resolution 1920 x 1200@60Hz
HDMI	Supports HDMI 1.4a, max resolution 3840x2160
DVI	No
Display Port	No
Multi Display	Yes(Dual Display)

Ethernet	
Interface	10/100/1000 Mbps
Controller	1 x Realtek RTL8111H
Connector	1 x RJ-45

SATA	
Max Data Transfer	SATA3 (6.0Gb/s)

Rear I/O	
VGA	0
HDMI	1 (co-layn with HDMI)
DVI-I/D	0
Display Port	0
Ethernet	1
USB	2 x USB 3.0
Audio	0
Serial	0
e-SATA	0
PS/2	0

Internal Connector	
USB	2 x USB 2.0 compliant
LVDS/Inverter	1/1
VGA	0
Serial	2 RS-232 (One RS-232 port) support RS-232/422/485)
SATA	1 x SATA3 (6.0Gb/s)
m-SATA	1
Mini-PCIe	1 (1 x co-lay with mSATA SSD)
Parallel	0
IrDA	0
Digital I/O	4 in/4 out
I2C/SMBUS	1
SATA PWR Output Con	1
Speaker Header	0

Watchdog Timer	
Output	From Super I/O to drag RESETCON#
Interval	256 segments, 0,1,2...255sec/min

Power Requirements	
Input PWR	12V DC-In 2-pin PWR connector
Power On	AT/ATX Supported
	AT:Directly PWR on as Power input ready
	ATX:Press Button to PWR on after Power input ready

Environment	
Operating Temperature	0°C ~ 60°C



The Perfect Fit for Any Space

Challenging the essence of how we define a desktop PC, GIGABYTE engineers have developed an ultra compact. Ideal for a broad range of computing applications at home or in the office, the BRIX expounds sheer simplicity and convenience.



The Power Behind Life

BRIX is a powerful system for any commercial applications. From Digital Signage, Vending machines to Security System, Industrial control, BRIX can be anywhere powering the systems behind everyday life.

BRIX Big Core, 8th Generation



Model Name	GB-BRi7-8550	GB-BRi5-8250	GB-BRi3-8130	GB-BRi7H-8550	GB-BRi5H-8250	GB-BRi3H-8130
Dimension	34.4 mm x 112.6 mm x 119.4 mm (1.35" x 4.43" x 4.7")			46.8 mm x 112.6 mm x 119.4 mm (1.84" x 4.43" x 4.7")		
Motherboard Size	105 x 110 mm					
CPU Family	Kaby Lake Refresh					
CPU	Intel® Core™ Quad Core i7-8550U 4.0GHz / 1.8GHz	Intel® Core™ Quad Core i5-8250U 3.4GHz / 1.6GHz	Intel® Core™ Dual Core i3-8130U 3.4GHz / 2.2GHz	Intel® Core™ Quad Core i7-8550U 4.0GHz / 1.8GHz	Intel® Core™ Quad Core i5-8250U 3.4GHz / 1.6GHz	Intel® Core™ Dual Core i3-8130U 3.4GHz / 2.2GHz
2.5" Storage Support	N/A			Supports 2.5" HDD/SSD, 7.0/9.5 mm thick (1 x 6 Gbps SATA 3)		
Memory	2 x SO-DIMM DDR4 slots 2400MHz Max. 32GB					
LAN	Gigabit LAN (Intel i219V)					
Wifi Card	Intel® Dual Band Wireless-AC 3168					
Graphics	Intel® UHD Graphics 620					
Audio	Realtek ALC255					
VGA Resolution (Max.)	N/A					
HDMI Resolution (Max.)	HDMI2.0a ws HDCP 2.2 4096 x 2304 @ 60Hz					
Mini DP Resolution (Max.)	DP1.2a ws HDCP 2.2 4096 x 2304 @ 60Hz					
Expansion Slots	1 x M.2 slot (2280_storage) PCIe X4 /SATA 1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WiFi+BT card					
Front I/O	1 x USB 3.1 type C 1 x USB3.1 1 x head phone jack with MIC 1 x Dual array Microphone					
Rear I/O	1 x HDMI(2.0a) 1 x Mini DisplayPort (1.2) 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot					
Side I/O	N/A					
USB3.1	Asmedia 3142					
Power Supply	Input: AC 100-240V Output: DC 19V 3.42A					
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm					
Support OS	WIN10 64bit					
Environment	System Environment Operating Temperature: 0°C to +35°C System Storage Temperature: -20°C to +60°C					

BRIX Big Core, 7th Generation



Model Name	GB-BKi7A-7500	GB-BKi5A-7200	GB-BKi3A-7100	GB-BKi7HA-7500	GB-BKi5HA-7200	GB-BKi3HA-7100
Dimension	34.4 mm x 112.6 mm x 119.4 mm (1.35" x 4.43" x 4.7")			46.8 mm x 112.6 mm x 119.4 mm (1.84" x 4.43" x 4.7")		
Motherboard Size	105 x 110 mm					
CPU Family	Kaby Lake					
CPU	Intel® Core™ i7-7500U 2.7GHz / 3.5GHz	Intel® Core™ i5-7200U 2.5GHz / 3.1GHz	Intel® Core™ i3-7100U 2.4GHz	Intel® Core™ i7-7500U 2.7GHz / 3.5GHz	Intel® Core™ i5-7200U 2.5GHz / 3.1GHz	Intel® Core™ i3-7100U 2.4GHz
2.5" Storage Support	N/A			Supports 2.5" HDD/SSD, 7.0/9.5 mm thick (1 x 6 Gbps SATA 3)		
Memory	2 x SO-DIMM DDR4 slots 2133MHz Max. 32GB					
LAN	Gigabit LAN (Intel i219V)					
Wifi Card	Intel® Dual Band Wireless-AC 3168					
Graphics	Intel® HD Graphics 620					
Audio	Realtek ALC255					
VGA Resolution (Max.)	N/A					
HDMI Resolution (Max.)	4096 x 2160 @ 60Hz (HDMI 2.0 and HDCP 2.2)					
Mini DP Resolution (Max.)	3840 x 2160@60Hz					
Expansion Slots	1 x M.2 slot (2280_storage) PCIe /SATA 1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WiFi+BT card					
Front I/O	1 x USB 3.1 type C 1 x USB3.1 1 x head phone jack with MIC					
Rear I/O	1 x HDMI (2.0) 1 x Mini DisplayPort (1.2) 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot					
USB3.1	Asmedia					
Power Supply	Input: AC 100-240V Output: DC 19V 3.42A					
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm					
Support OS	WIN10 64bit					
Environment	System Environment Operating Temperature: 0°C to +35°C System Storage Temperature: -20°C to +60°C					

BRIX Small Core



Model Name	GB-BLPD-5005	GB-BLCE-4105	GB-BPCE-3455	GB-BPCE-3350	GB-BPCE-3350C
Dimension	46.8 mm x 112.6 mm x 119.4 mm (1.84" x 4.43" x 4.7")			56.1 mm x 107.6 mm x 114.4 mm (2.21" x 4.24" x 4.5")	
Motherboard Size	105 x 110 mm			100 x 105 mm	
CPU Family	Gemini Lake			Apollo Lake	
CPU	Intel® Pentium® Quad Core Processor J5005 2.8GHz, 4 core (TDP 10W)	Intel® Celeron® Quad Core Processor J4105 2.5GHz, 4 core (TDP 10W)	Intel® Celeron® Quad Core Processor J3455 2.3GHz, 4 core (TDP 10W)	Intel® Celeron® Processor N3350 2.4GHz, 2 core (TDP 6W)	
2.5" Storage Support	Supports 2.5" HDD/SSD, 7.0/9.5 mm thick (1 x 6 Gbps SATA 3)				
Memory	2 x SO-DIMM DDR4 slots 2400MHz		2 x SO-DIMM DDR3L slots (DDR3 1.35V) 1333/ 1600/ 1866 MHz		1 x SO-DIMM DDR3L slots (DDR3 1.35V) 1333/ 1600/ 1866 MHz
LAN	Gigabit LAN (Realtek RTL8111HS)				
Wifi Card	Intel® Dual Band Wireless-AC 3168				
Graphics	Intel® UHD Graphics 605	Intel® UHD Graphics 600	Intel® HD Graphics 500		
Audio	Realtek ALC255				Realtek ALC891
VGA Resolution (Max.)	N/A		1920 x 1200 @60 Hz		
HDMI Resolution (Max.)	HDMI2.0a 4096 x 2160 @ 60 Hz			3840 x 2160 @30 Hz	
Mini DP Resolution (Max.)	DP1.2a 4096 x 2160 @ 60Hz		N/A		
Expansion Slots	1 x M.2 slot (2280_storage) PCIe X2/SATA 1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WIFI+BT card		1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WIFI+BT card		
Front I/O	1 x USB3.0 1 x USB3.0 type C 1 x headphone jack with MIC		1 x Micro SD card slot - -		
Rear I/O	1 x HDMI(2.0a) 1 x mini DisplayPort (1.2a) 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot		1 x HDMI (2.0) 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot		1 x HDMI (1.4) 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot
Side I/O	N/A N/A N/A		1 x VGA 1 x Headphone 2 x USB3.0		
Power Supply	Input: AC 100-240V Output: DC 19V 2.1A				
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm				
Support OS	WIN10 64bit				
Environment	System Environment Operating Temperature: 0°C to +35°C System Storage Temperature: -20°C to +60°C				

BRIX Small Core



Model Name	GB-BLCE-4105C	GB-BLCE-4000C	GB-BLCE-5005R	GB-BLCE-4105R	GB-BLCE-4000RC
Dimension	56.22 mm x 103 mm x 116.52 mm (2.21" x 4.06" x 4.59")				
Motherboard Size	104 x 103 mm				
CPU Family	Gemini Lake				
CPU	Intel® Celeron® Quad Core Processor J4105 2.5GHz, 4 core (TDP 10W)	Intel® Celeron® Processor N4000 2.6GHz, 2 core (TDP 6W)	Intel® Pentium® Quad Core Silver Processor J5005 2.8GHz, 4 core (TDP 10W)	Intel® Celeron® Quad Core Processor J4105 2.5GHz, 4 core (TDP 10W)	Intel® Celeron® Processor N4000 2.6GHz, 2 core (TDP 6W)
2.5" Storage Support	Supports 2.5" HDD/SSD, 7.0/9.5 mm thick (1 x 6 Gbps SATA 3)				
Memory	1 x SO-DIMM DDR4 slot 2400MHz Max. 8GB				
LAN	Gigabit LAN (Realtek RTL8111HS)				
Wifi Card	Intel® Dual Band Wireless-AC 3168				
Graphics	Intel® UHD Graphics 600				
Audio	Realtek ALC891				
VGA Resolution (Max.)	1920 x 1200 @60 Hz		N/A		
HDMI Resolution (Max.)	HDMI1.4b 1920 x 1080 @ 60 Hz		HDMI 2.0 4K (3840 x 2160) @60Hz		
Mini DP Resolution (Max.)	-				
Expansion Slots	1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WIFI+BT card				
Front I/O	1 x USB3.0 1 x USB3.0 type-C 1 x Headphone Jack 1 x Microphone Jack				
Rear I/O	1 x HDMI(1.4b) 2 x USB 3.0 1 x RJ45 1 x VGA -		1 x HDMI (2.0) 1 x HDMI (1.4b) 2 x USB 3.0 1 x RJ45 - -		
Side I/O	1 x Kensington lock slot				
Power Supply	Input: AC 100-240V Output: DC 19V 2.1A				
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm				
Support OS	WIN10 64bit				
Environment	System Environment Operating Temperature: 0°C to +35°C System Storage Temperature: -20°C to +60°C				

BRIX Series

BRIX Small Core

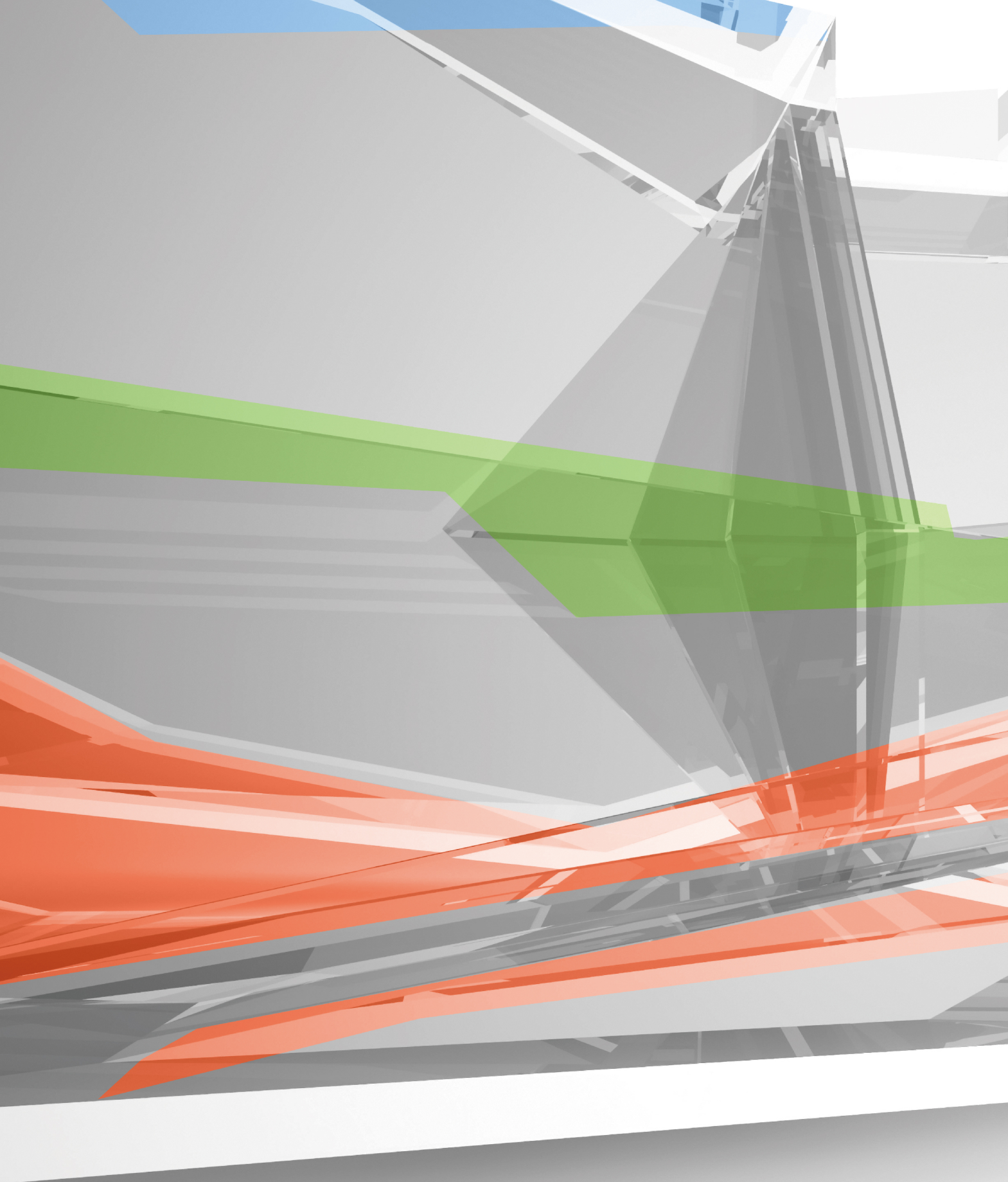


Model Name	GB-BACE-3160	GB-BACE-3150	GB-BACE-3000	GB-BXBT-2807	GB-BXBT-1900
Dimension	56.1 mm x 107.6 mm x 114.4 mm (2.21" x 4.24" x 4.5")				
Motherboard Size	100 x 105 mm				
CPU Family	Braswell			Bay Trail	
CPU	Intel® Celeron® Quad Core Processor J3160 2M Cache, up to 2.24 GHz	Intel® Celeron® Processor N3150 up to 2.08GHz	Intel® Celeron® Processor N3000 up to 2.08GHz	Intel® Celeron® Processor N2807 up to 2.17GHz	Intel® Celeron® Processor J1900 up to 2.42GHz
2.5" Storage Support	Supports 2.5" thickness 7.0/9.5mm Hard Drives (1 x 6Gbps SATA3)			Supports 2.5" thickness 7.0/9.5mm Hard Drives (1 x 3Gbps SATA2)	
Memory	1x SO-DIMM DDR3L 1.35V slot 1066/1600 MHz Max. 8GB			1x SO-DIMM DDR3L 1.35V slot 1333MHz Max. 8GB	
LAN	Gigabit LAN (Realtek RTL8111H)			Gigabit LAN (Realtek RTL8111G)	
Wifi Card	Intel® Dual Band Wireless-AC 3160			AW-NB159H	
Graphics	Intel® HD Graphics 400			Intel® HD Graphics	
Audio	Realtek ALC255			Realtek ALC283	
VGA Resolution (Max.)	1920 x 1200 @60 Hz			2048 x 1152 @ 60Hz	
HDMI Resolution (Max.)	3840x2160 @ 30 Hz (HDMI 1.4b)			1920 x 1080 @ 60Hz (HDMI 1.4a)	
Mini DP Resolution (Max.)	N/A				
Expansion Slots	1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WiFi+BT card			1 x Half-size mini-PCIe slot occupied by the WiFi+BT card	
Front I/O	2x USB 3.0 1 x Micro SD card slot			1 x USB 3.0 -	
Rear I/O	1 x HDMI 2 x USB 3.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot			1 x HDMI 2 x USB 2.0 1 x RJ45 1 x DC-In 1 x Kensington lock slot	
Side I/O	1 x VGA D-Sub 1 x headset phone jack 1 x Mic phone jack			1 x VGA D-Sub 1 x Audio-out / Mic-In -	
USB3.1	N/A			N/A	
Power Supply	Input: AC 100-240V Output: DC 19V 2.1A			Input: AC 100-240V Output: DC 12V 2.5A	
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm				
Support OS	WIN7 64bit WIN8.1 64bit WIN10 64bit			WIN7 64bit WIN8 32/64bit WIN8.1 32/64bit WIN10 64bit	
Environment	System Environment Operating Temperature: 0°C to +35°C System Storage Temperature: -20°C to +60°C				

BRIX IOT



Model Name	GB-BNi7G4-1050Ti	GB-EAPD-4200	GB-EACE-3450	GB-EKi3M-7100	GB-EKi3A-7100
Dimension	2.0L (300 mm x 230 mm x 30 mm)	27 mm x 105 mm x 165 mm (1.06" x 4.13" x 6.5")		36 mm x 117 mm x 180 mm (1.42" x 4.61" x 7.09")	
Motherboard Size	100 x 150 mm			158 x 114 mm	105 x 110 mm
CPU	Intel® Core™ i7-7700HQ Quad Core 2.8GHz / 3.8GHz (45W)	Intel® Pentium® Processor N4200 up to 2.5GHz, Quad core (TDP 6W)	Intel® Celeron® Processor N3450 up to 2.2GHz, Quad core (TDP 6W)	Intel® Core™ i3-7100U Processor up to 2.40GHz, Dual core (TDP 15W)	
2.5" Storage Support	N/A				
Memory	2 x SO-DIMM DDR4 slots 2133 MHz Max. 64GB	2 x SO-DIMM DDR3L slots (DDR3L 1.35V) 1333/1600/1866 MHz Max. 8GB		2 x SO-DIMM DDR4 slots (DDR4 1.2V) 2133 MHz Max. 32GB	
LAN	Gigabit LAN (Intel i219LM)	Dual Gigabit LAN (Realtek RTL8111HS)		Dual Gigabit LAN (Intel i219LM and Intel i210AT)	Gigabit LAN (Intel i219LM)
Wifi Card	Intel® Dual Band Wireless-AC Intel 8260			Intel® Dual Band Wireless-AC 3165	
Graphics	GeForce® GTX 1050 Ti DDR5 4GB	Intel® HD Graphics 505	Intel® HD Graphics 500	Intel® HD Graphics 620	
Audio	Realtek ALC255				
VGA Resolution (Max.)	N/A				
HDMI Resolution (Max.)	N/A	3840 x 2160 @ 30 Hz		4096 x 2160 @ 60Hz (HDMI 2.0 and HDCP 2.2)	
Mini DP Resolution (Max.)	4 x 5120x3200 @ 60 Hz	N/A			4096x2304 Hz
Expansion Slots	1 x M.2 slot (2280_storage) PCIe / SATA (Intel Optane memory support) 1 x M.2 slot (2280_storage) PCIe (CPU directly) 1 x PCIe M.2 NGFF 2230 A-E key slot occupied by the WiFi+BT card	1 x M.2 slot (2280_storage) SATA 1 x M.2 NGFF 2230 A-E key slot occupied by WiFi+BT card 1 x Half-size mini-PCIe slot for 3G module 1 x Micro SIM card connector	1 x M.2 slot (2280_storage) PCIe / SATA, 1 x M.2 NGFF 2230 A-E key slot occupied by WiFi+ BT card, 1 x Half-size mini-PCIe slot for 3G module, 1 x Micro SIM card connector		1 x M.2 slot (2280_storage) PCIe / SATA 1 x M.2 NGFF 2230 A-E key slot occupied by WiFi+BT card
Front I/O	2 x USB 3.1 (1 x USB type C) 3 x USB 3.0, 1 x RJ45, 1 x DC-In 1 x Kensington lock slot 1 x Head phone Jack 1 x Microphone Jack	1 x COM Port (RS232/422/485) via RJ45 connector 2 x USB 3.0 1 x Micro SD card slot (support SD 3.0 compliance devices) 1 x Power Button	1 x Power Button, 1 x COM (support RS232/422/485 via BIOS setting) 1 x USB 3.1 type C 1 x USB 3.1 type A, 2 x USB 3.0 1 x Micro SD card slot (support SD 3.0 compliance devices)		1 x Power Button 1 x Headphone / Microphone jack 1 x USB 3.1 type C 1 x USB 3.1 type A 1 x COM (RS232)
Rear I/O	4 x Mini DisplayPort -	1 x Headphone/ Microphone jack, 2 x RJ45, 2 x USB3.0 2 x HDMI 1.4b 3840 x 2160@30Hz 1 x DC-In		1 x Headphone / Microphone jack 2 x HDMI 2.0 (one with HDCP 2.2) 2 x RJ45, 2 x USB 3.0 1 x DC-In	
Side I/O	N/A -	1 x Kensington lock slot 3 x Antenna SMA connector (2 for WIFI, 1 for 3G)		1 x Kensington lock slot 3 x Antenna SMA connector (2 for WIFI, 1 for 3G)	
USB3.1	Asmedia	N/A			
Power Supply	Input: AC 100-240V Output: DC 19.5V 9.23A	DC 19/12 volt power adapter (Shipment 19V/65W)		DC 19/12 volt power adapter (Shipment 19V/90W) DC 19/12 volt power adapter (Shipment 19V/65W)	
VESA	Bracket included Supports 75 x 75 and 100 x 100 mm				
Support OS	WIN10 64bit				
System Environment Operating Temperature	0°C to +35°C	0°C to +50°C		0°C to +40°C	
System Storage Temperature	-20°C to +60°C	-20°C to +60°C		-20°C to +60°C	



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